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ABSTRACT

Stressing the value of documents and records as information sources for the educational evaluation community, this report explores the differences between the two, their utility for inquirers, and methods and procedures for dealing with them. Three forms of documentary analysis are described: (1) simple tracking, which involves documenting both the overt and tacit decisions and operations of the enterprise; (2) content analysis, which involves the development of categories of manifest and latent content and of the relationship among the categories; and (3) aggregational analysis, which involves the aggregation of information from dissimilar documents under new conceptual rubrics which in turn yield insights not intended or anticipated in the original source materials. Examples of each method are given, ethical questions are addressed, and a selected bibliography is provided. (FM)

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Documentary Analysis and Record Utilization: New Uses for Old Methods

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Paper prepared for presentation at the Annual Meeting,

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Just as sociology at some point became caught up in the exercise of creating grand theorie to the exclusion of grounded theory (Glaser and Strauss, 1967), so education and other social action research became enamored of creating research or evaluation data de novo: new questionnaires, new tests new sets of interview protocols, new interviews (often of the same persons), all related to a priori concepts. Equally often, in the process of generating such de novo findings other valuable materials were overlooked, unnoticed, or scorned because of their very availability or "routineness".

But the cost of research has skyrocketed. Personnel, time, travel, equipment, sites, subjects, research assistants, computer technicians and computer processing -- all have contributed to making the enterprise of research costly, time-consuming, and labor intensive. In the face of rising costs, hard questions are being raised about the value of such research, especially when the results produce data which conclude that there are "no significant differences", when the overall body of accumulated knowledge has not been well informed, or when description provided has proven inadequate or misleading to other inquirers. Senator Proxmire's monthly Golden Fleece awards are but an amusing, if embarrassing, tip of the iceberg when the subject under consideration is waste in sponsored research and evaluation (especially Federally funded efforts). Hard questions are being asked from several quarters about the value of inquiry which turns up little new information or few results which inform public policy.

Undoubtedly much of the error lies in method. But some surely may be attributed to the fact that as social inquirers, it has appeared more prestigious to us to generate "new" information than to resort to

other activities which are promising but hardly lend "star status" to our careers. We refer to reanalysis of previously collected data; to meta-analysis of data (i.e., cluster analysis, case study aggregation analysis or propositional analysis): and to secondary analyses (including documentary analysis--such as content analysis--and record analysis--including trend and aggregation analysis).

Documents and records are usually readily available, often public, non-reactive and unobtrusive, and why educational inquirers would not want to use them is unclear. Records particularly are an enormously useful source, although other documents, such as evaluation reports, technical reports, case studies and the like, are now amenable to such analyses that not only aggregate common information, but lead to new insights into public policy and its formulation (Lucas, 1974a,b; Lincoln, 1977). But educational inquirers appear to be bent on generating de novo data for every problem they attack, perhaps because they typically desire to test an hypothesis and such tests seem to call for new instruments or special data collection arrangements. If Denny (1978, p. 21) is correct that, "If the contributions of educational psychology and evaluative research to our understanding of teaching and learning could be translated into human stature it would stand a little over four feet high," then a new approach is surely needed. It is, coincidentally, probably also true that the consistent failure to utilize documents and records (at least in fair proportion to their existence and availability) accounts in part for the fact that educational inquiry inputs so often are not grounded. If inquirers had to discipline themselves to make their experimental situations and their findings make sense in terms of

context, their results might be more meaningful, rather than the "dreary palaver we call research and evaluation literature" (Denny, 1978, p. 22). More will be said about the importance of context shortly.

This chapter will deal with both documents and records, their acquisition, aggregation and analysis. Though both are (usually) written records (occasionally, they are verbal transciptions, films or photographs), a document is not the same thing as a record. Nevertheless, both are forms of communication based on verbal behavior. If "The work of the world, and its entertainment, is in no small measure mediated by verbal and other symbolic behavior," (Cartwright, 1953, p.422) then making sense of the records of verbal behavior left is a crucial part of the investigation of man and his social behavior.

What is a document? What is a record?

Neither the dictionary nor the methodological literature is of much assistance in making a distinction between documents and records. The dictionary, for example, defines a document as "an original or official printed or written paper furnishing information or used as proof of something else," and a record as "an official written account of proceedings" or "the known facts regarding someone." The overlap between these definitions is obvious; indeed, following the lead of the dictionary one might well define a document as a record and a record as a document. The methodological literature confounds this problem even further by admitting as documents a variety of written materials that are produced only because an inquiry has been undertaken. Thus

Holsti (1969) indicates that documents include "verbal data produced by subjects at the behest of the investigator,...the psychiatric interview, and various projective instruments such as the Thematic Apperception Test...[and] responses to open-ended questions generated in survey research,...written messages derived from a simulation study,...or communication produced during group interaction." Bodgan and Taylor (1975) and others suggest similar definitions. While it is true that written residues of these kinds can be analyzed by the methods to be described in this paper, we believe it is useful for analytic and pedagogic purposes to exclude them from consideration here. Hence we shall define a record as a written statement prepared by an individual or an agency for the purpose of attesting to an event or providing an accounting, and a document as any written (or filmed) material other than a record and which was not prepared specifically in response to some request from or some task set by the investigator.

What is an example of a document? A list of examples of documents could, with some imagination and creativity, go on for pages. But good examples of documents include: letters, memoirs, autobiographies, diaries or journals, textbooks, wills, position papers, suicide notes, speeches, novels, newspaper articles and editorials, epitaphs, television and film scripts, memoranda, case studies, life histories, medical histories, political propaganda pamphlets, government publications, photographs, diplomatic communiques, and the like.

Documents can be sorted into various typologies. The most obvious category is the source of the document. Another very useful distinction between "primary and secondary" documents, the latter falling

into the class of what would be called "hearsay" in a court of law. That is to say, it is likely not generated from firsthand experience of a situation or event, but rather from other sources. Other useful dichotomies for sorting documents include those of "solicited" vs. "unsolicited," that is, requested by someone (usually the inquirer) versus volunteered; "comprehensive" vs. "limited," "edited" vs. "complete" or "unedited;" and "anonymous" vs. "signed" or attributable (Bogdan and Taylor, 1975, p. 96). To these we would also add another distinction, that between "spontaneous" (as in a diary) and "intentional" (as in a letter to an editor), although obviously in those categories "spontaneous" may come close to being "unsolicited" or "unedited" and "intentional" may closely resemble also "edited" and "signed."

The very number of these typologies make the whole matter of documentary classification very complex. If we use the six dichotomies suggested above, we have to contemplate 2^6=64 categories. These sixty-four categories may be further subdivided in terms of the apparent motivation of the writer. If for example it was decided to use a simple five-category motivational system--explication, support, self-justification, moral duty and self-aggrandizement--we could conceivably have enlarged our taxonomy to 64 x 5 = 320 categories. Since the prospect of dealing with that number of possible cells (or more) boggles the mind, the bases for categorization are probably more usefully viewed as criteria for judging the utility of a document rather than for assigning it unequivocally to some cell of known properties within a taxonomy.

What is an example of a record? A record as noted before is a written residue attesting to an event or situation, or providing an

accounting of an event or transaction. Records have typically not been utilized in educational research or evaluation, as indeed they have not in many forms of social research, with the notable exceptions of demography and cliometrics, which has leaned on them rather heavily. Examples of records include: airline manifests, audits and consultants' reports, birth records, business records, cab campany records, campaign contribution and expenditure records, charitable gifts records, chattle mortgage records, city directories, death records, expense account vouchers, financial information, government directories, gun registrations, income tax records, private organization records and membership lists, legal newspapers, legal notices, marriage records, military records, professional, business and trade directories, religious directories, school directories, Securities and Exchange Commision records, state regulatory records, telephone company records, vanity records, vehicle records, voting records and registration, welfare records; zoning, land use and property tax records, county plat books, court records, and police records and election records. The list of types of records is clearly and apparently limitless, and with computer technology revolutionizing record storage and retrieval, it can be reasonably expected that the list of types of records kept (both known and unknown) will grow exponentially over the next few years.

Unlike documents, whch come into being for a variety of motivational purposes, records are generally compiled simply to "keep track" of events or transactions. They form an official statement that some event or transaction has occurred, and while they may be altered or forged in some way, much of the time they are public, reasonably direct, and reasonably accurate (accessibility to an investigator, how-

ever, may be limited, since some records--such as bank records and income tax returns--are generally not available to those who are not authorized to review them).

Why differentiate between records and documents? There are two major reasons why distinctions are made between documents and records. The first is that they represent different motivations or purposes on the part of the writer. Records, as has been noted, attest to an event or transaction, and form an official chronicle which is part of an larger work, usually on the processes and proceedings of public affairs. Documents on the other hand, may be personal (private) or public. If public, they serve to make others aware of a point of view, persuade, aggrandize, explicate or justify. If personal, they may be a form of special pleading (e.g., a letter) or exhibitionism, they may arise from a desire for order or a relief from tension, they may serve as therapy, literary delight, or public service, they may spring from the desire for monetary gain (witness the Howard Hughes "autobiographies"), they may be assigned (e.g., one may be instructed to create a memorandum which forms a 'letter of understanding'), they may be written for scientific interest (e.g., the observation logs of Thomas Jefferson and Benjamin Franklin), or they may serve as social reincorporation devices as did the Nixon interviews with David Frost (Allport, 1947, pp. 68-75). Thus records and documents are entirely different forms of written or verbal records, arising from different motivations and serving separate purposes.

A second and much more important reason to differentiate carefully between documents and records is that the modes of analysis appropri-

ate to each are substantially different. In the case of records, appropriate analytic tools include aggregation/ integration methods, trend analysis and what we shall term "tracking." The former two are essentially quantitative methods and hence will not be discussed here. In the case of documents, appropriate analytic tools include content analysis and the case survey aggregation method, both of which shall be considered. The differentiation between documents and records both in respect to definition and appropriate modes of analysis is illustrated in Figure 1.

The Utility of Documents and Records for Inquirers

Some social scientists have never questioned the value of records and documents for inquiry. They have utilized them extensively to predict and explicate fertility patterns, population shifts, needs and desires for housing, transportation and consumer goods, and for patterns of education. Likewise, an investigative journalist learns early on that records and documents are invaluable resources for tracing transactions which may shed light on cases and relationships under scrutiny. Hage, et al (1976, p. 41) caution that, "Investigative reporting is not often as exciting and glamorous as that of Woodward and Bernstein. More often it involved laborious checking of public records, finding documentation for the story." Williams likewise asserts (p. 37, 1978), "The first and great commandment of investigative journalism is this: get the record."

If other types of inquiry have relied heavily on documents and records, why has not educational inquiry? Perhaps this failure relates to the earlier arguments for de novo data collection. As likely, it

Figure 1. Distinctions Between Documents and Records

	Purpose	Analytic Tools
Documents	Any written residue other than a record and not produced by the investigator.	Content analysis Case survey method
Records	Any written residue attesting to an event or providing an accounting.	Aggregation/integration Trend analysis Tracking

SOME DIFFERENCES BETWEEN DOCUMENTS AND RECORDS

relates to the lack of training in the use of records and documents, to the relative ease with which most of them are acquired, with its attendant assumptions about familiarity and contempt, or to the general lack of regard for context in which educational decisions are made, programs are carried out, and policy is constructed. For whatever the reason, inquirers cannot much longer afford to ignore the resource.

First, documents and records are a stable, rich and rewarding resource. Both tend to persist; that is, while they may be buried back in files which are no longer used, they are often available for the asking. They provide a base from which any subsequent inquirers can work, and thus lend stability to further inquiry.

Second, records (as opposed to documents, although occasionally the same will hold true for those writings also) constitute a legally unassailable base from which to defend oneself against allegations, interpretations and libel. The best defense in a challenge to an evaluation report is to be able to show that you told only the truth, and the best evidence for truth is most often the public record.

Third, both documents and records represent a "natural", source of information--a delight to the naturalistic inquirer. Not only are they, in fact, an "in context" source of information--that is, they arise from the context and exist in it--but they consist of information about the context. That is, records record what happened in the context, and documents record a variety of other evidence about the environment and people's perceptions of it. They are repositories, as a result, of some of the best grounded data available on the events or situations under investigation.

Fourth, they are available on a low-cost or no cost basis, requiring often only the investigator's time and energy. Public records, particularly, are readily available and for the most part, open to scrutiny. Although documents may exist in corporate or project files, they also might not, and tracking them down might involve some ingenuity. For the naturalistic inquirer, the obvious places to search come first, the ingenuity later. The most apparent sources of documents are old files and persons who were associated with the project or program. But often, files are stored and cannot be easily retrieved, and persons have moved on to other sites, died, retired, or are otherwise unreachable. A next move would be to try other persons not as closely related to the project, but who have had some connection with it. Those persons will often collect random documents from the affiliated project, and may have them. Failing easily reachable sources, the document hunter moves in ways which resemble either the historian searching for written evidence (Altick, 1950) or the interviewer attempting to interview someone who does not wish to be interviewed (Dexter, 1967). If some source has a document, or is thought to have some document which is particularly important, often persistent courtesy (with emphasis on both persistent and courtesy) will prevail. Sources of documents and records can often be persuaded to part with them simply because it is finally easier to get rid of an inquirer than to keep saying no. Most possessors of documents do not allow access for one of four reasons: indifference, hostility, ignorance, or finally, avarice (Altick, 1950, p. 116). Nearly all of those reasons can be overcome by a final tactic, that of the introduction by a friend or associate of the family or document holder. Introduction by trusted familiars has long been used to

make social connections. It is an equally worthy technique for those desiring interviews or seeking missing documents, and ought not to be overlooked in the effort to prevail upon document holders to release materials.

Fifth, documents and records both are non-reactive. Although there are instances when access to primary persons is impossible in any event (the person has died, for instance) and the only remaining way to study him or his connections is through documentary analysis, there are also other times when, although a person is available, documents still provide the most objective tack for understanding some aspect of his performance or behavior. Holsti (1969, p. 15ff) addressed this problem thus:

> "Despite their very real merits for social research, even the best experiment or survey studies the subject and his responses in a highly artificial situation. Knowledge that one is being studied may, in some circumstances, materially alter those aspects of behavior under analysis. Especially when it is important to get repeated measures of the subjects' values, attitudes and the like over a period of time, and if one has reason to believe that continued interaction between the investigator and subject may alter behavior, then analysis of the subject's statements may be a useful way to gather the required data. An important feature of content analysis is that it is a "nonreactive" or "unobtrusive" research technique."

Thus, when live interaction with a subject would likely alter behavior or perspectives, then documentary analysis (specifically, content analysis) is a useful way of gathering information for analysis which is not subject to interaction effects between collector and subject.

Sixth, whether or not the inquirer finally decides to interact with his subject(s), content analysis and other forms of documentary and record analysis enable supplementary and contextual data to be gathered. That is, documentary analysis may be an extension of a larger

body of research, an additional technique employed, or the primary form of research itself. In any event, it lends contextual wealth and texture, and grounds any inquiry in the milieu of the writer. The grounding in real-world issues and day-to-day concerns is ultimately what the naturalistic inquirer is about.

Within the framework of historiography, the art and science of writing history, the importance of context has been asserted continually. Clark's injunction to writers of history still holds true:

> "The most important principle of historical scholarship is the principle of importance of context. When considering any historical evidence, an investigator must take account of the situation at the moment in time when the event it records happened and also at the moment when it was recorded." (1967, p. 25, italics added).

Even earlier than Clark, Gray and others warned document analysts to "Beware of that worst of judicial sins--taking the evidence away from its context." (1964, p.58)

Within the framework of education research and evaluation, documentary and record analysis serves an opposite function: it fosters the maintenance of inquirer interest in the context, and helps to insure that research is not removed from its social, historical and political frame of reference.

On the other side of the analytic fence, Allport, acting as devil's advocate for and against documentary analysis, met some of the criticism against the use of personal documents in social science research. Some of those criticisms he found "to be well-grounded, other to be irrelevant or trivial, and still others to be contingent upon the type of document employed and the use to which it is put" (1947, p.125). Because the criticisms against document usage contain warnings about how they -- and records -- ought to be used, some review of the case against them as perceived by Allport appears in order.

There is first the unrepresentativeness of the sample.[1] In personal documents, this is particularly true, but it is also occasionally true in social action programs: often no one on the project keeps very good notes on processes, few memoranda are generated, and even more often, the only writing that is done is in response to funders' requests for technical reports or other periodic statements about program or project progress. If no documents exist, however, or if the documents are sparse and seem uninformative, this ought to tell the inquirer something about the context. Absence or paucity of documents relative to a project can be as commanding a statement as a careful content analysis, if the overall situation or environment is what is to be described.

Second, there are certain stylistic and nonobjectivity criticisms of documents. Allport answers:

> "Since personal documents are, and always will be, completely subjective, there is no way of convincing the bitter-end objectivist that he should employ them...[But] (1) Extreme objectivism has disclosed its own weakness. The resurgence of phenomenology has brought back to favor the personal report. (2) The conflict is not so irreconcilable as it appears. Users of the personal document have learned many lessons from behaviorism and positivism..." (1947, p. 127)

To the list of criticisms may also be added concerns for the validity of the document. More will be said about this later in the chapter, but Allport maintains that there are at least three tests that one can use in establishing nonquantitative validity measures: "the general honesty and credibility of the report...this is the ad hominen test...

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[1] This refers only to personal documents and documentary evidences, not, in this instance, to the use of records.

The plausibility of the document in terms of our own past experiences, as they are relevant, can be considered...[and] the test of internal consis tency or self-confrontation has to be widely relied upon. A document that hangs together, that represents a structured configuration of human life and harbors no impossible contradictions has at least a prima facie validity" (p. 128).

There are problems of deception (deliberate), self-deception (which Allport calls "unintentional self-justification") and blindness to motives, which Allport ascribes to either the difficulty "for men to report adequately their own motives, and...true whether or not the mechanism of self-justification is at work" or to the "lapse of time that occurs between the completion of an act and its recording" (p. 132). Additionally, there are problems of oversimplification, wherein the writer "does not want unsolved riddles, visible gaps, unexplained conduct. His desires for completeness lead him to fill in unknown parts in a manner that fabricates a satisfying closure." But, Allport cautioned, "... third-person documents likewise simplify, and...laboratory and field investigations do the same thing" (pp.134-5). In that case, the document analyst need simply be prepared to understand that programs, projects and persons are not as straightforward and coherent as they are likely to be pictured, either by themselves or others. (To some extent, this is responsive to the later pleas of Wax [1971] and Reinharz [1978], to note, along with descriptions of research, the changes which occurred on site and in the inquirer.) Likewise, the effects of mood or errors of memory may impinge on the accuracy (isomorphism, or one-to-one correspondence with the event) or completeness (gaps in memory) of the document. In the idiographic usage of personal docu-

ments, Allport steadfastly maintains mnemonic errors are significant as what the individual recalls and records, simply because "the very fact that the subject structures and recalls his life in a certain manner is what we want to know" (p. 136).

This last two criticisms are the implicit conceptualizations (inherent in the writer's choice of theme and phrase) and the arbitrariness of conceptualization. The implicit conceptualizations--or the limitation of the author to data that he thinks are important--is, in and of itself useful, Allport points out, and the arbitrariness of that same conceptualization, especially "when the interpretation is given on the basis of manifestly meager data" (p. 139) is no worse than what psychologists and other social scientists already do to more "experimental facts." He concludes rather wryly: "That personal documents actually are any worse off at the hands of psychologists than are other forms of raw data seems doubtful" (p. 139). So it would seem that so long as one operates with a set of caveats--of which the above criticisms are but a part--the use of documents (especially) and records (to somewhat less extent) is legitimate, either as a primary or secondary (and supplementary) technique. As ever, the guiding rule for choice of a method is which of the techniques available provides more data, better data, and a lower cost than other methods. Further, those sources which are replete with clues as to the nature of the context should never be ignored, whatever other inquiry methods one chooses. Although occasionally documentary or record analysis will be the singular research method employed, it ought never to be ignored even when other field and research techniques form the primary information-gathering mode.

Methods and Procedures for Dealing with Documents and Records

Although documents and records fall into a class of research evidences (verbal and primarily written), their acquisition, treatment and analyses are very different. For that reason, we shall treat those topic in separate sections which follow.

Documentary Analysis.

Documents, as noted previously, are distinct from records in several ways. Persons interested in using records are primarily interested in "tracking," that is, in following official recordings of transactions or events, and perhaps determining the frequency or serialness of events or transactions. Persons using documents, however, are often interested in a number of other items, including: Making inferences about the values, sentiments, intentions, belief or ideologies of the sources or authors of the documents; making inferences about group or societal (or personal) values; and, evaluating the effects of communications on audiences that they reasch (Williamson, et al 1977, pp. 291-7.) These foregoing reasons, however, are not a sufficient list. An investigator might want to do documentary analysis because he has come into possession of a series of documents which contain valuable information about some inquiry problem of interest, or he has sought out such documents as part of an inquiry which he thinks might be useful or which might lend greater clarity to his understanding of the research setting. As ever, the "great trade-off" rule applies: do whatever will gain more, better, or less expensive information.

What does it mean to do documentary analysis? There are two separate ways to respond to this question, depending on whether we

are talking about the analysis of a single document or the analysis of multiple documents. Communication theorists have tended to analyze communications in terms of the following questions: "Who says what, to whom, how, and with what effect, and why?" (Holsti, 1969, p.24). The key words are who (conceptualized as the sender), why (conceptualized as the encoding process), how (conceptualized as the channel), what (conceptualized as the message, which may address either what or how), with what effect (conceptualized as the receiver's reaction, or, to use a more abstract term, the decoding process), and to whom (conceptualized as the recipient). Thus communication can be conceived as "composed of six basic elements: a source or sender, an encoding process which results in a message, a channel of transmission, a detector or recipient of the message, and a decoding process" (Holsti, 1969, p. 24).

One form of documentary analysis is concerned primarily with the "what" or "message" portion of the communication. Whether concerned with a single document, or with multiple documents relating to the same event, or written by the same person, analysis which is directed toward the message portion of communication is called "content analysis." For instance, a social scientist might be studying the single last suicide note of a deceased person for clues to attitudes or beliefs. Or he might be concerned with the letters, journals, and last note of a suicide. Or he might be interested in suicide notes as a class of evidence about despondent persons. In all three instances, the investigator would most likely use content analysis, at least in part, for his inquiry.

In other forms of inquiry, the investigator will not be concerned with only a single document, but with a collection of documents which will, in general, display neither the same format, organization or content categories, but which deal with different instances of the same or a like phenomenon. That is to say, the documents are case studies of like events, programs, settings, situations, but they do not all concern themselves with the same phenomenon. Several good examples of this form of documentary analysis, which is called case study aggregation analysis (Lucas, 1974a;b) would be: evaluation reports from multiple sites of a locally-adopted bilingual education program; policy statements from a series of mental health clinics regarding collection of payments from indigent clients; or case studies of citizen participation in electoral campaigns in two dozen midwestern cities. Each of the foregoing sets of documents (or case studies, which term is used more broadly here than in most social science literature) contains information which is likely common to all settings, but which, until recently, was unable to be aggregated or integrated to provide a body of common understandings. The case survey aggregation method, developed at the RAND Corporation, now allows such diverse, random and often qualitatively uneven documents to be aggregated in order to derive new understandings from old bodies of literature. We shall talk about both content analysis and case survey aggregation method in turn. Before doing so, however, some primary questions about the nature of documents themselves need to be entertained.

Presuming one has come into a body of documents, or has set about acquiring them (method of analysis still undetermined), how does one know that the document is what it purports to be? That is, what

questions ought to be asked in order to determine that the document is as represented (whatever other problems with the writing that may exist because of lapses of memory, bad motives, etc.)? Clark's The Critical Historian (1967) addressed the issue of "documents genuine and spurious" and suggested criteria by which the credibility of the document might be established as the real document constructed by the writer. He suggested the following questions (although some may not prove as useful when the sources for documents are fairly straightforward; nevertheless, each has some utility and they bear repeating):

- What is the history of the document?
- How did it come into my hands?
- What guarantee is there that it is what it pretends to be?
- Is the document complete, as originally constructed?
- Has it been tampered with or edited?
- If the document is genuine, under what circumstances and for what purposes was it produced?
- Who was/is the author?
- What was he trying to accomplish? For whom was the document intended?
- What were the maker's sources of information? Does the document represent an eyewitness account, a secondhand account, a reconstruction of an event long prior to the writing, an interpretation?
- What was or is the maker's bias?
- To what extent was the writer likely to want to tell the truth?

- Do other documents exist which might shed additional light on this same story, event, project, program, context? If so, are they available, accessible? Who holds them?

Clearly, some of these questions are directed toward historiographical and textual criticism. But a number of them are also particularly useful when documents are not ascribed (as many project reports are not these days); when one comes into possession of some form of "copied" paper (a photographic reproduction which may have been edited or altered); or when documents are assembled from sources who do not wish their identity known (the reader ought immediately to think of Woodward and Bernstein, the secretary at the headquarters of the Committee to Re-elect the President and Deep Throat). As a caution to the inquirer, when multiple copies of the same document are available from different sources, one ought to aquire them all, especially if they are purported to be "sensitive." A bit of careful checking, while time-consuming, can at least establish, if earlier and later drafts are available, what has been excised from a final draft. The excisions themselves may provide important clues for further inquiry. Clark's warning to historians, while it ought not be make paranoids among educational evaluators and inquirers, bears some mention here:

> "Documents as documents, especially formal documents, sometimes have a semi-hypnotic effect on the minds of those who use them, and it is important to remember that all documents have been produced by fallible and potentially dishonest human beings, and that before they reach the scholar they may have passed through the hands of others who may also have had their failings, and were also potentially dishonest" (1967, p.52).

What does the methodology of content analysis entail? Content analysis itself is a term in evolution. Those three definitions which seem to come closest to the usage we intend are those of Berelson (1952, p. 18), Barcus (1959, p. 8) and Holsti (1967, p. 14). Berelson's definition, "Content analysis is a research technique for the objective, systematic and quantitative description of the manifest content of communication," relies on assumptions of counting, of translating the analysis into some form of numerical statement. The definition of Barcus, "The term 'content analysis' is used here to mean the scientific analysis of communications messages...The method is broadly speaking the 'scientific method,' and while being catholic in nature, it requires that the analysis be rigorous and systematic," however, implies no such quantification. After some debate on the issue of the numerical quality of content analysis, Holsti settled on a definition which makes no reference to the quantification issue: "Content analysis is any technique for making inferences by objectively and systematically identifying specified characteristics of messages" (p. 14). This definition suits our purposes for the same reasons it suited his: it satisfies the three criteria of objectivity, systemization, and theoretical framework (although Holsti goes one step further and refuses to limit himself to the manifest content of documents, even while admitting that only the manifest and not the latent may be coded). For the purposes of this book, two other observations are in order. First, in documents (unless commissioned by the inquirer) the content is generally not specifically under the inquirer's control. He has to take what he can get and work from those materials. Second, as a result of the first, the "specified characteristics" of the messages may need to emerge from the material

itself rather than be imposed a priori by theoretical construct. From our perspective, this is a most fortuitous circumstance, since it virtually guarantees that the categories will be grounded in the data (hence, in the context).

What are the basic characteristics of content analysis? There seem to be four major characteristics of content analysis on which most methodologists agree and a fifth which is in the process of transformation. While different writers may state them slightly differently, the basic tenets of what constitutes solid and rigorous analysis are well known. First and foremost, it is a rule-guided process. Each step is "carried out on the basis of explicitly formulated rules and procedures" (Holsti, 1969 p. 3). In order to satisfy the criterion of objectivity, and to "minimize...the possibility that the findings reflect the analyst's subjective predispositions rather than the contents of the documents," rules must be derived, procedures clearly delineated, and selection criteria clearly defined. A subsequent analyst, using the same rules, procedures and criteria for selection ought to be able to arrive at the same inferences from the documents.

Second, it is a systematic process. Holsti defined the systematic nature of the inquiry as conforming "...to certain general canons of category construction...[so] that the inclusion and exclusion of content or categories is done according to consistently applied rules" (1969, p. 4). Once the rules have been clearly explicated, they are applied in the same way to all content whether the analyst regards it as relevant or not.

Third, it is a process which aims for generality. The findings ought, in the long haul, to display theoretical relevance, or, in the case of naturalistic inquiry (to extend the set of characteristics a bit further), they ought to further the development of insights with respect to context which serve in other instances than the single document in hand.[2] In commenting about the issue of generality, or theoretical relevance, Holsti drives the point home forcefully (1969, p. 5):

> "...Purely descriptive information about content, unrelated to other attributes of document or to the characteristics of the sender or recipient of the message is of little value...Such results take on meaning when we compared them with other attributes of the documents, with documents produced by other sources, with characteristics of the persons who produced the documents, or the times in which they lived, or the audience for which they were intended. Stated somewhat differently, a datum about commuication content is meaningless until it is related to at least one other datum... Thus all content analysis is concerned with comparison, the type of comparison being dictated by the investigator's theory."

Fourth, it deals in manifest content. The investigator is of course often interested in drawing inferences from the documents that he is examining, but such interpretations are a matter for later analysis, particularly in view of the totality of documents (and their type, e.g., whether private or public, formal or informal, official or personal, edited versus complete, and the like) to be examined and other contextual factors that might be taken into account. The content analysis itself is confined to the manifest (as opposed to latent) content of the documents, although content analysts themselves (Berelson, 1952; Holsti, 1967) have taken issue with the manifest-latent issue. There is

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[2] Since the authors have previously attended to the question of generality (generalizability) of naturalistic research, we feel free to include a somewhat broader definition for the naturalistic inquirer here, in order to make applicable the method under discussion.

general agreement that in the coding stage of research, "...the stage at which specified words, themes, and the like are located in the text and placed into categories, one is limited to recording only those items which actually appear in the document..." (Holsti, 1967, p. 12), while at the later interpretative stage, it is generally agreed now to be permissable for the investigator to rely upon his insight, intuition and imagination to draw inferences about latent content decoding process as well as to draw conclusions about the meaning of the manifest content (encoding process). This broader definition serves the needs of naturalistic inquirers well, since it is not only semantic symbols which are relevant to the research process, but "issues" and "concerns" in the minds of the project staff, stakeholding audiences, contextual information (including description), and value systems operant in the context.

Fifth, content analysis has historically been defined (although that definition is changing) as a quantitative technique. Assuming the method is strictly a quantitative one allows the researcher a high degree of precision in the statement of conclusions, allows him to assign some degree of confidence to the generalization of results and permits certain kinds of numerical manipulations to be performed on the data. But arguments against such a strict quantitative (and toward a more qualitative) interpretation of content analyzed data can be made, including: that frequency of assertion (or symbol) is not necessarily related to the importance of that assertion (either to the sender or the recipient), that occasionally more meaningful inferences may be drawn from qualitative or nonquantitative methods, and that often, emphasis on quantification of symbols and precision comes at the cost of problem

significance. Holsti cites Tukey, the statistician, on this point (1967, p. 12):

> "Far better an approximate answer to the right question, which is often vague, than an exact answer to the wrong question, which can always be made precise. Data analysis must progress by approximate answers, at best, since its knowledge of what the problem really is will at best be approximate."

In any event, both quantitative and qualitative approaches are now deemed suitable, depending on the questions which need to be answered by the research.

Now that content analysis has been generally described (in methodological terms), some comment about the actual coding process seems in order. It is not the intent of this paper to explain how one does content analysis; there are many fine and carefully drawn works on that process already available. Nevertheless, the first problem beyond the acquisition of documents has almost always been what constituted good categories for coding. The decisions confronting the analyst fall under three general rubrics (Holsti, 1967, p. 94):

"How is the research problem defined in terms of categories?

What unit of content is to be classified?

What system of enumeration will be used?"

As Holsti notes, these are not separate decisions, but interrelated ones, and always made on the basis of the original formulation of the research problem. In short, decisions with regard to these three crucial questions are grounded in the problem to be investigated.

"Coding," in its precise definitional sense, "is the process whereby raw data are systematically transformed and aggregated into units which permit precise descripton of relevant content characteristics"

(Holsti, 1967, p. 94). The coding process ought to be guided by two overriding principles: first, whatever method the inquirer may choose to code, that method (or set of categories, or unit of analysis) has embedded in it assumptions pertaining to the nature of the data and whatever inferences may be drawn from them; and second, theory, hypotheses and inquiry questions alone ought to guide the coding process and determine content categories. "In short, unless he can state explicitly why he is analyzing documents, he cannot intelligently work out a plan on how to do it" (p. 94). The coding process, while it is essentially an "arty" one, informed by practice, theory, and careful reading, ultimately determines whether or not the resultant research is worthwhile, for without coding categories which fulfill canons of good taxonomic construction, the research is incomplete, irrelevant, or possibly in error with respect to its conclusions.

Canons of good category or taxonomy construction are five in number:

1. categories must first and foremost "reflect the purposes of the research;" the design must include conceptual definitions, which are the definitions of the variables with which the investigator is concerned, and the operational definitions which specify the indicators "which determine whether a given content datum falls within" a given category;

2. categories must be exhaustive - that is, each datum must finally be able to be placed in one category or another. Often this is accomplished by specifying the concepts (or variables) which define the study "as precisely as possible by characterizing its major properties; these would serve as rules by which coders

would judge whether content units fall within its boundaries" (Holsti,1967, p. 99).

3. categories will be mutually exclusive--that is, no single content datum reasonably fits into more than one cell or category;

4. Categories must be independent--that is, assignment of some piece of data will not in any way affect the classification of other pieces of data, although this rule is difficult, if not impossible, to satisfy when "content units are scaled along some dimension," or when "some form of ranking is used to assign values to content units;"

5. categories must be derived from a single classification principle--that is, levels of the analysis which are conceptually different must be kept separate (see earlier discussion on problems with manifest and latent content, and levels of analysis) (derived from Holsti, pp. 94ff).

Given this set of rules, however, it is not clear how one goes about the creation of categories for unitizing and taxonomizing the symbols (or issues and concerns) identified, and indeed, there are no simple answers to this question, although there are several "tacks" which one may take. The naturalistic inquirer, first and foremost, would want some or all of these categories, at least at some point in the inquiry, to emerge from the data. In that way, the classification system finally derived will be as well-grounded as any. Furthermore, rarely does any investigator adopt the classification scheme of a predecessor; the emphasis on de novo research, on "unique" or "new" problems, has tended to persuade inquirers that new classifications, new coding systems were called for. The classical emphasis upon theory-

testing, too, as opposed to the creation of grounded theory, has caused investigators to assume that new taxonomies were needed. But some consideration of the types of categories which have been used would be a useful one, and might serve as a starting point for the evaluator or inquirer who has not before utilized documentary analysis.

There are two broad typologies of categories, the "what is said" (or subject matter classification) dimension and the "how it is said" (or device) dimension. Within those two broad areas, some, though clearly not all, of the possibilities might include:

"What is said" categories:

- o subject matter - what is the communication about?
- o direction - how is the subject matter treated (favorably, unfavorably, strongly, weakly, humorously, seriously)?
- o values - what values, goals or wants are stated?
- o methods - what methods are utilized to achieve goals or intentions?
- o traits - what are the characteristics ascribed to the persons or contexts described?
- o actors - to whom is the performance of certain acts ascribed?
- o authority - at whose behest or in whose name are statements made?
- o origin - where, or from whom, does the communication originate (the reader will remember that often, documents will come into his hands which are not ascribed; that is, they are listed as having come from a "project" or "program," or some

official source such as an Office of Budget, but they will bear no name).

- o target - to whom is the document directed--to what person or group or office?
- o location - where does the action take place? About what site or event is the document written?
- o conflict - what are the sources and levels of conflict?
- o endings - is there closure? Are conflicts resolved happily, ambiguously, or tragically?
- o time - when does the action take place? If a series of documents exist, is there some implied chronological order to the sequence of events, or do all documents describe different perspectives and perceptions of the same event?

"How it is said" categories:

- o form or type of communication - what is the medium of communication (e.g., newspaper, radio, television speech, editorial, project memorandum, quarterly progress report, personal letter, administrative log or journal, personal diary, or the like)?
- o form of statement - what is the grammatical or syntactical form of the communication?
- o device - what is the rhetorical, persuasive or propagandistic method used? (adopted from Holsti, 1967, 99ff)

Since there are no standard schema or norms of classification, the construction of categories is often a trial-and-error process, forcing the investigator to move between the data and either an a priori or ground-

ed theory. "Sorts" are performed on items of data; when the sorts do not account for all units of data, other tentative categories are generated. The process is completed, using either a combination of theory and data or a combination of theory-building or context-construction and data, modifying categories until the system is complete and each datum can be sensibly accounted for.

The designation of units of analysis, too, is a coding decision which may be decided either prior to or during undertaking the actual analysis. The unit of analysis may be either the single word or symbol, the theme (which is defined as an assertion about some subject, e.g., "Aryan superiority" as asserted by Nazi propaganda pamphlets during World War II), the characters or actors about whom the communication is concerned, the grammatical unit, or the type of item (e.g., film, book, newspaper editorial, and the like). Again, as with the creation of a classification system, the selection of a unit or units of analysis depends upon three considerations: (1) which units meet best the needs of the researcher, (2) which fit the requirements of research, since the determination of the unit of analysis can mediate the results of the analysis, and (3) which units fulfill the criteria of "better data, more data and least costly data" (which garner the most amount of data for the smallest expenditure of time and resources).

If the analysis is to be carried out on a quantitative basis (rather than purely qualitatively), systems of enumeration must also be devised (the system which is devised also forming a portion of the body of rules which guide the analysis). Systems of enumeration identified thus far in a variety of content analyses include measures of time and space; actual appearance of the unit of analysis; frequency of the unit's appear-

ance; and intensity (of particular use when the analysis involves attitudes, beliefs and values), which is often measured on a scale.

As with any method qua method in the social sciences, the determination of how one might sample (if the universe of documents pertaining to the phenomenon under investigation is available, and some choices must be made as to which will be analyzed), how reliability (or relevance), and validity (or fittingness) might be established, are unique to some extent to the method. The inquirer seeking to carry out a first content analysis ought to make himself familar with classical methodological works in content analysis, and adapt the method to his particular needs. An important caution to remember is that this method, like the next one which will be discussed, is a rule-guided procedure. When rules are clearly specified and categories clearly defined, an independent researcher ought to be able to arrive at the same results using the same documents for analytic purposes. That is to say, the research process itself--whether or not independent researchers might agree about the taxonomy--ought to be duplicable if the same rules and procedures are followed.

Is documentary analysis like any other form of analysis, the inquirer might wonder? Indeed it is. Bogdan and Taylor (1975, pp. 95ff.) in their work on qualitative methods, place both personal documents and unstructured interviews into the same chapter, primarily because they can be dealt with in parallel ways. We would suggest that the basic problem of formulating content analyses is identical with those of organizing and interpreting either notes from unstructured interviews or from participant observations.[3]

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[3] In fact, lists of behavior types, or participation/non-participation observation "schedules" or protocols represent nothing less than a priori categorization, unitization, or taxonomic representations of what the observer might see.

Everything we have said under those headings has relevance here, and everything we have said in the foregoing discussion also has relevance in those other two inquiry situations. The creation of classification systems, the decision-making with regard to units of analysis, and the formulation of taxonomic headings for subjects, concerns, issues or behaviors under investiga tion--all utilize the methods of content analysis, and abide by the same procedural canons. The methodologies gua method in all three areas are virtually identical.

What does the methodology of case survey aggregation analysis entail? As proposed by William Lucas (1974a;b) the case survey aggregation method is a means for aggregating "...diverse case studies together under a common conceptual framework so that findings will be cumulative...to identify what it is we already 'know,' and what it is we do not know, and what it is we suspect" (1974b, p. 1) The term case study, it should be made clear, is used in a somewhat broader definitional sense in this instance than is normally used in the social sciences. Case study in this particular method means any descriptive or evaluative analysis of a common social unit, or a local program, or of some agency. For instance, included in the "case study" category might be "clinical studies of individuals, administrative studies of organization, anthropological reports on primitive societies" (1974 a, p. 8), evaluation reports, and activities reports on local programs (1974b, p. 1). The strength of the method lies "in its capacity to integrate the findings of diverse studies about organizations and programs. It is more flexible in that many different types of studies using different measurement techniques can be brought together, and new concepts can be devel-

oped and considered that none of the original research ever addressed" (1974a, p. 12). Thus, the documentary case studies utilized for this type of research may be dramatically dissimilar in form or coverage from one another, so long as they are descriptive of some common social unit (e.g., a series of mainstreaming inservice projects at each of fifteen different locations in the United States, the clinical studies of six paranoid schizophrenics, each of whom believes he is Napoleon Bonaparte, the evaluations of a dozen sites where NSF curricula are being adopted, and the like).

What are the basic characteristics of the method? The essentials of the method are six, which will be reviewed briefly here, then described, utilizing an example with which we are familiar. Required are:

1. a checklist--defined as a set of tightly defined questions and answers intended to ascertain information about certain outcomes of interest and the alternative determinants of those outcomes. Both the questions and possible answers to the questions emerge from the research problem and/or from a guiding theoretical paradigm or model.
2. a set of rules, which guides the search for, and the sampling of, case studies. Since the case survey method is based upon the "universe" of all such case studies (which pertain to the common social unit under investigation), the search and sample rules are actually inclusion/exclusion rules which are formulated beforehand so that bias in the selection (assuming availability of the universe of case studies) does not occur.
3. a set of decision rules to be followed in dealing with the questions;

4. a group of reader-analysts who will apply the checklist to all of the case studies;
5. a confidence scale on which each reader-analyst may record his subjective impression about the level of confidence he has in any judgment which he makes; and
6. a means for checking reader-analyst reliability.

The Checklist Some illustrations with an example may prove fruitful here. The study (Lincoln, 1977) was undertaken to explain why certain predictions made by competent sociologists of education (Sieber and Lazarsfeld, 1964; 1966) in the mid-sixties about the important future of bureaus and institutes of research, development and field service in schools of education did not come to pass. Sieber and Lazarsfeld had studied major "bureaus" around the country, and had arrived at certain propositions and conclusions about their potential in the research and development arena which, if sustained, would indeed have meant a bright and productive future for such units. It was felt, however that some, if not all, of the assertions about the future of these units had failed to materialize for a variety of reasons, e.g., Congressional support for certain kinds of researcher training had not been forthcoming, or that certain assumptions about the nature of organizations made by Sieber and Lazarsfeld turned out to be invalid as demonstrated by later research in organizational theory and behavior, or that fiscal crises precipitated other forms of organizational action to support research and development activity. For many of the Sieber and Lazarsfeld propositions, it was possible to structure certain alternative hypotheses or "counter-propositions," based on recent documented history on research developments or discoveries. A sample set of propositions, with their counter-propositions, looked like this:

Proposition	Counter-Proposition
Research is a faculty priority, and when allowed to choose, faculty members overwhelmingly will choose research over teaching.	Teaching, not research, is a faculty priority is all institutions except private, doctoral level research-oriented institutions.
Team, especially interdisciplinary, research is better than research done by single individuals.	Team-type research is not necessarily better than research done by the lone researcher.
The reward systems of universities are, or will be, accomodating of multiple modes of research (e.g., teamwork modes).	Reward systems of universities are, by and large, not multiply focussed but singly focussed, rewarding the lone researcher.
University-based research organizations grow out of the needs of researchers to increase their own opportunities for serious scholarship.	University-based research organizations--like most research subunits--grow out of administrative desire to create a unit to protect "precarious values" from erosion or attack.

The list of questions which reader-analysts were to respond to grew out of these propositional areas, which fell into five conceptual categories, to wit: goals and missions of the bureau, group processes and faculty reward systems, activities and work roles of faculty, unit integration (degree to which the bureau was integrated with the school of education at large), and individual perceptions and motivations of the missions and processes. The list of propositions and counter-propositions gave rise to both the questions and the alternative determinants of outcome, listed in the form of possible answers to the questions. For example, given the last proposition mentioned above, the checklist contained this item (among several addressed to the same conceptual category):

> What apparent motive was employed in justifying the creation of such a unit (i.e., a bureau, institute or center of educational research, development and/or service)?

1. To create opportunities for extended or interdisciplinary scholarship.
2. To serve as a "holding company" for logistical or fiscal purposes.
3. To stimulate and model behavior for extra-bureau faculty.
4. To serve as a research resource and advisory facility.
5. Other (please describe) _____.
6. Cannot tell from the case study.

Sixty-four questions and determinants of outcomes were thus generated to probe the five conceptual areas. Each of the question and answer sets was applied to each case study by each of three reader-analysts (since the n of the case studies was small; if the volume of case studies in the universe were large, each reader-analyst would only do a portion of the total analysis).

Inclusion/exclusion rules (searching and sampling procedures) for case studies. The first step in the process is the generation of a tight definition of the phenomenon under investigation. In this instance, only education research, development and service units housed in schools or colleges of education were considered. The possible universe of such units was determined by a search of RITE[4] project (Clark and Guba, 1977) files and a survey of deans of such units throughout the

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[4] RITE is an acronym for "Research on Institutions of Teacher Education," the name for the national study of schools, colleges and departments of education conducted by Clark and Guba.

country, which had been undertaken to solicit information about the existence of such units. All such unit directors (or their deans) were solicited for documents pertaining to the bureaus--histories of the units, annual reports, staffing policies, five-year plans, budgets, if available, and the like. All documents provided were included, except that highly redundant documents were excluded and documents which contained information on fewer than three outcomes of interest (of five broad categories) were discarded on technical adequacy grounds.

Decision rules for questions. Concepts relevant to the inquiry, e.g., reward systems for bureau members, budgetary arrangements for support of the unit, unit missions, and the like were defined. Three pre-analyzed case studies were provided to reader-analysts for guidance on how definitions were to be applied.

The reader-analysts. Three reader analysts were selected who had credentials both in the area of educational research and development and in organizational theory. One had had actual experience directing a bureau of research and development. Each was trained in the definitions and concepts, "walked through" one case study with the investigator, then allowed to complete three case studies (discarded for historical bias from the final sample) in order to establish reader reliability and inter-reader reliability coefficients.

Confidence scales. Each item of the checklist was accompanied by three measures of confidence. The first was the option to signify that the case study did not contain any information relating to the item of

interest. Second, the analyst was asked to provide, if he or she could, an actual page number in a specific document that supported the answer given or judgment made. Third, for each item the analyst indicated his confidence in the judgment on a five-point scale ranging from "1"--high confidence--to "5"--no confidence.

Inter-reader reliability measures. Reader-analysts were personally and individually trained by the investigator using pre-analyzed cases. In addition, each reader-analyst was asked to complete three "trial" analyses (utilizing the cases not utilized in the study) which could then be intercorrelated. Reader-analysts who might not have shown a sufficiently high correspondence with ratings of peers and the investigator would have been eliminated (although in fact inter-reader reliability estimates were all .75 or better, both on trial cases and on the actual case studies).

Procedures. As is the case with content analysis, the generation of categories of interest is dictated by the questions of research interest. Likewise, each step of the inquiry process is guided by rules which are developed in order to eliminate bias in the sampling and searching to establish reliability and validity, and to insure that rules are sufficiently clear and definitions sufficiently rigorous that the study could be repeated by another set of analysts using the same rules and procedures.

Once all case studies have been analyzed with the checklist, results can be tabulated either by hand (if the number of case studies is relatively small) or by computer. In the particular case cited, all case

studies were analyzed by each of the three reader-analysts, although this might not always be done. Because inter-reader reliabilities were not perfect, occasionally the investigator had to "adjudicate" responses herself--that is, return to the case study and determine the best possible answer. Frequencies were tabulated and conclusions drawn from the 64 items under the five broad organizing rubrics.

While the foregoing discussion should not be taken as a complete explication of the case survey aggregation method, nevertheless, it should be sufficient to demonstrate that meta-analyses of data--especially of data which were intended for other purposes--particularly policy analysis, is an extremely useful technique with certain kinds of documents.

Documentary analysis can therefore proceed from two different directions: either analysis of the documents, and their encoded and decoded messages themselves, and as representatives of broader classes of theoretical rubrics for which they were not originally intended but for which, when subjected to certain aggregation techniques, they may yield certain new and broader forms of inquiry data. Analysis of records, the second technique for dealing with written accounts which are official, proceeds along a slight different track.

Analysis of records

A record, as noted before, is a written residue attesting to an event or transaction, or providing an accounting. The types and numbers of records which exist is probably unknown and unknowable, and the number grows, due to computer capabilities for storage and retrieval, daily. The kinds of records which exist can be categorized in several ways, for instance: 1) who holds them--Federal, state,

local, country or municipal authorities, private corporations, credit corporations, health organizations (including insurance companies and hospitals), or banks, to name a few; 2) to whom they are legally accessible--those accessible to the public, those inaccessible to the public, or at least to the public at large, although they may be accessible to individuals (for instance, credit bureau ratings), and those which are not mentioned specifically by law. The types of records which are, for all intents and purposes, public, vary from state to state, although the amount of information available to reporters and the general public is increasing rapidly as a result of campaign reforms, and the push for political disclosure (Anderson and Benjaminson, 1976).

The first and greatest injunction to anyone looking for official records is to presume that if an event happened, some record of it also exists. Once the event is presumed to have happened, then the search for the record can begin. But how does one determine what records he needs to look at in any given situation? The metaphors of investigative reporting and good detective work provide the answers. How does the investigator find the trail he wants in the apparently untrackable wilderness of records he might consult? Williams (1978) suggests a form of reconstructed logic for the investigative reporter which he states thus:

> "The veteran has ingrained within himself a special style of reasoning. He knows how things normally work. If he observes a phenomenon, an effect, he wonders what caused it. He develops a hypothesis and begins checking it against observable facts. He works to back up the chain of facts, searching for information that will either support or negate his hypothesis. He tries different combinations of conflicting versions of a story until he finds the one in which salient points overlap" (p.13).

In a similar vein, Locklin (1976, p. 7) comments:

> "I have a working theory that if I know something, if I know what the situation is, the date the money went, how much money went, who paid, who got, if I know that, I can usually prove it."

The central notion here is tracking. Guba (1978) has identified "a common approach to the 'original research' which seems to be based on tracking. Actions of persons, whether legal or illegal, inevitably leave tracks: if one knows how things work, and if one suspects that a certain action has occurred, one can imagine what track it must be leaving; one then looks for the tracks, which has been 'warping and weaving' with the other circumstances of the matter, and one usually finds them, if they exist at all. Absence of tracks cannot be taken as an indication of innocence (the tracker may, after all, be inept), but their presence is proof positive--they constitute the 'smoking gun' " (p.48).

While the image of a 'smoking gun' may be a bit strong for the educational evaluator, there are many parallels between the investigative journalist's use of tracking and the reconstruction of events and causal connections for the evaluator. A less likely parallel between the two professions is the likelihood that the educational evaluator might encounter dishonesty, graft, corruption, or any of the social ills that the investigative reporter makes his daily fare. More often than not, the evaluator will practice his craft in and around projects, programs and schools where those who operate them are men and women of conscience, honest and simply trying to get a job done. The sites will more often than not be extremely public settings (e.g., public schools or universities), funds will likely be public (state or federal funds), and records which need to be perused will likely as not be public, since disclosure of records and sunshine laws make such records accessible to anyone who needs or wants them, or at least to those who have a legitimate right to them. For the educational evaluator who finds that a project director (or other administrator) decides to be obstructionist

and withold documents and records, there is usually someone else on the project who will give them up.

How do I handle the records that I get? With respect to the notion of tracking, Guba (1978) comments that for the investigative journalist, "The reconstruction of tracks and their verification is perhaps the most distinguishing and characteristic feature...It is by that process that he keeps his task manageable, provides direction to his activity, and knows when he has reached a point at which he can comfortably stop looking further" (p.49). The educational evaluator, however, unlike the investigative journalist, would rarely, if ever, operate on a clue or 'tip' that something illegal were taking place. Rather he would generate a series of working hypotheses (grounded in the context itself) about what was happening on site. Starting from those hypotheses, he would seek the records (and documents) which allowed him to either confirm or disconfirm his hypotheses.

Great similarity between the methods of investigative journalism with respect to records and Scriven's modus operandi or MO method (1974) with respect to evaluation exists, and it is useful to look at the verification of cause-and-effect relationships using the latter. The MO strategy is one that:

1. establishes all probable causes for an event or situation.
2. checks to see which probable causes are in evidences.
3. checks for the causal chain which is characteristic of each of the probable causes which are present.
4. labels as the most likely cause that one whose characteristic causal chain is completed.

The tracking strategy of investigative journalism follows a similar path. Most writers in the area appear to imply that one must develop a working hypothesis with respect to the subject of interest, determine which 'tracks' or record trails would be left if the working hypothesis were true, and then check the appropriate records to confirm or disconfirm the hypothesis. For the educational evaluator, the notion of tracking falls somewhere between what Scriven suggests that the modus operandi methodologist perform and what the investigative journalist does. While the journalist clearly is looking for cause-effect relationships, the evaluator is searching for evidences of relatedness (Guba, 1978). There are many methods other than records analysis which test for cause-effect relationships in much more controlled fashion; and control, particularly of environments and contexts, is not what the naturalistic evaluator is seeking. The journalist (or detective) is probably also constrained to search for pre-existent records the validity of which (because they are generally public and legal documents) is at least partially established. For the naturalistic evaluator, the records may mean not only what is already written, but what can be "generated by additional procedures undertaken by the educational evaluator (a mode of operation which...is not available to the investigative reporter in the large majority of cases)" (Guba, 1978, p. 108).

Guba cites three cases which are excellent exemplars of the work of the investigative reporter, the forensic pathologist (on whose work the modus operandi method is built), and the educational evaluator which bear repeating here. A typical problem for the investigative reporter might run thus:

> A municipal officer accepts a bribe to sway the administration on a certain issue favorably to the officers "client." The client cannot pay the bribe directly in case since it is likely that the IRS would be attracted if the officer were suddenly to deposit a large, unaccounted-for-sum. Instead, the client sells a desirable piece of property to the officer at bargain basement rates; he in turn resells the property at its true value. The officer of course pays the tax on the capital gain, but the remaining money is 'clean' (having been 'laundered') and can be deposited without hesitation. But a trail has been left in the transfer of deeds, which the shrewd investigative reporter may uncover by an assiduous search of courthouse records. Of course, in real life this story is likely to have been complicated by the intervention of a dummy corporation to whom the client sold the property and which then resold it to the municipal officer. But those transactions also leave records; the tracking task is more difficult but the principle is the same. (1978, p. 106)

The forensic pathologist operates in much the same way, since "operative causes 'fulfill their MO contracts,' i.e., leave the full characteristic causal chain behind" (Guba, 1978, p. 107). It is this causal chain for which the pathologist also searches. The example given is one which seems to routinely plague a favorite TV show:

> If, for example, a corpse were discovered which has both traces of poison and a gunshot wound in evidence, the killing cause is the one whose full causal chain can be traced. If, for example, the poison were of the type in which oxygen atoms in the blood were replaced by atoms of the poison, thereby effectively shutting off respiration, a chemical test of blood samples would show whether any appreciable number of red blood cells were affected; if not, one may conclude that it was the gunshot wound which did the trick. Conversely, if there were little or no bleeding around the gunshot wound, one could probably conclude that the effective agent was the poison. Checking on <u>both</u> characteristic causal chains would establish almost certainly whether gunshot or poison was the fatal agent (1978, p. 107).

For an educational evaluator, application of the process would likely be slightly different, although the same principles apply. Several examples cited by Guba in the evaluation arena include the following ones:

> If it is asserted that a pupil's motivation to read is raised by a certain teaching approach, that assertion can be checked by looking at existing library withdrawal records, increases in sales for books of a certain kind at local bookstores, etc...[Or] If it is

> asserted that a certain instructional outcome occurred because of the serendipitous introduction of certain originally unplanned teaching techniques, the existence of those techniques and their day-to-day impact on the classroom can be at least partially assessed by consulting log descriptions of classroom interactions...[Or] If it is asserted that evaluation reports have systematically 'turned off' certain parent groups in the community, some insight might be gained into this problem by re-reading local newspaper accounts of PTA meetings at which these reports were disseminated (1978, p. 108).

Clearly, there are an infinite number of ways in which the tracking technique can be used. The practitioner of naturalistic evaluation will have, in retrospect, any number of recollections of how this might have been applied in his own work, and will be able to generate a number of instances where it will be useful in the future.

Are there other techniques which are useful in records analysis?

The answer to that question is most assuredly yes. The inquiry techniques which remain to the evaluator are three in number: triangulation, "circling and shuffling," and "filling," the latter two of which are journalists' terms for the certain processes of iteration, that is, returning to sources to verify and fill in gaps in information. The analytic technique which will be discussed shortly is really a method for making sense of records, for being able to retrieve them and utilize them to complete pictures. It relates to the creation of indices and summaries which show interrelatedness between actors and contexts.

Triangulation. Triangulation is not new in social research. It is, in fact, an old concept both to sociology and to anthropology, where it has come to mean the process of "comparing and contrasting information drawn from difference sources, and/or determined by different methodologies" (Guba, 1978, p. 116). Triangulation is useful for verifying information on the same event from different actors or participants, and

also for allowing more confidence in data generated by different methodologies. Webb, et al. (1966, p. 3) contend that:

> "Once a proposition has been confirmed by two or more measurement processes, the uncertainty of its interpretation is greatly reduced. The most persuasive evidence comes through a triangulation of measurement processes. If a proposition can survive the onslaught of a series of imperfect measures, with all their relevant error, confidence should be placed in it."

But triangulation is important from another perspective for the naturalistic inquirer. Presumably one of the most important strengths of naturalistic inquiry is its ability to divorce itself from the unidimensional, value-consensual paradigm which has guided social action research and evaluation. The process of triangulation permits multiple value perspectives to emerge from the same context or event, and allows for their explication and presentation alongside each other. In the course of checking "facts," the naturalistic inquirer causes differing perceptions and values to surface. That multiplicity of values then becomes warp and weft of the contextual fabric.

Circling and shuffling. Each of these terms is borrowed from the jargon of investigative journalism. They signify the steps taken to extend, complete and bound an inquiry. "Circling" as defined by Williams (1978, p. 80) is the process of taking data or information collected from a single source and "running it back around your circle of contacts for refutation or confirmation." For the purposes of journalism, this particular tactic involves talking with those who are essentially presumed to be essentially cooperative. "Shuffling" proceeds from the assumption that the contacts are non-cooperative, that is, they are hostile, may be in league with the subject of the investigation, and the questioning will likely proceed from a conflictual, rather than a cooper-

ative, mode. The purpose of shuffling is not simply verification or disconfirmation, however. It is to some extent extension of information. Not only will information from one source be checked against the stories of others (who are hostile sources), but some new information is sought.

Filling. "Filling" performs two functions: it both sets the boundaries of the inquiry (which are also being set by other means, e.g., time, money, resources, unavailable records, and the like), and completes the picture within those boundaries. The process of setting the boundaries, on the one hand, and filling in the spaces of the boundaries, on the other, is essentially that of achieving convergence and divergence in naturalistic inquiry.

Those concepts appear to have utility for the naturalistic evaluator as they do for the investigative reporter or homicide detective. And indeed, they need not be reserved for records analysis, but can be used (and ought to be used) with all forms of data collection which the naturalistic inquirer chooses to use. That is, the techniques described above are not in any way limited to simply the skills of this paper. They can and probably ought to be extended to each and all of the methodological techniques in the armament of the naturalistic evaluator.

How does one integrate and utilize the information collected from records?

Unless one is a historian searching for a single document or record, probably no single record will suit the purposes of the overall inquiry. Once again, the techniques of the patient detective or the investigative journalist prove useful. Files must be created which essentially cross-index information and actors, and it is from these careful summaries

and indices that "a coherent picture" begins to emerge. The steps are basically these seven:

- o A filing system is initiated by creating a folder for each person known to be involved in the inquiry. One may begin, in fact, with a single folder for a single person known to the investigator. Into this file ought first to go a detailed description of everything which is known about the person (a personal and/or professional history), and copies of what others have written or reported about the person.
- o As other persons become involved, or as the principals enter into transactions (e.g., hold meetings, have lunch, transfer property between themselves, and the like) with each other, transaction folders are developed. Each "deal" or transaction has a folder of its own, and each transaction is cross-indexed with the original personnel folder(s).
- o Profiles are developed on each of the actors. Information relating to each individual's background and operating style are added to his folder during the inquiry as the original material is fleshed out and information is received.
- o Chronologies are developed for the various transactions. When information becomes available (or is located), at first it may not appear to fit a pattern. But by keeping dated chronologies, events and transactions become more easily traced both backward through time and predicted for the future. As a result we may find that on January 5, Mr. Smith had lunch with Mr. Jones; on January 5, Mr. Jones withdrew $5,000 from his back account; on January 6, Mr. Smith deposited

$2,500 in his account; on January 8, Mr. Jones was awarded an important contract over which Mr. Smith's office had jurisdiction; and on January 9, Mr. Jones deposited an additional $2,500 in his account.

- Important items and events are cross-referenced as the files are developed. Thus, the transaction given as an example above might ultimately be noted both in the files of the personnel and in their transactions files. Notation indicating cross-referencing would also be included in each file.
- Files must be summarized on a systematic basis. In this way, the evaluator or investigator need not deal with original material each time he returns to the file, but rather has available to him a summary of what the file contains with which he may work.
- Entries in the files will give rise to hypotheses which must be checked or which point to information gaps which need to be closed. It is quite possible at this point that the original hypothesis which initiated the inquiry has blossomed into several hypotheses (did Mr. Jones bribe Mr. Smith?), or that the inquiry may have become extended in such a way as to include a web of events and transactions quite larger than the investigator originally expected. The reader is reminded that the original Woodward and Bernstein inquiry began as an interest in why a number of "third-rate burglars" would be

> interested in the files of a weak presidential candidate. Before the inquiry ended, it had toppled the "imperial Presidency" of Richard M. Nixon. No such effort was ever originally intended; but the burglary, of course, led to a web of complex interactions and relationships which have not yet been fully sorted or clarified.

This process of developing and keeping files, cross-indexing materials and references and building chronologies appears to have many applications for the naturalistic inquirer. The utility of such a process, especially for larger inquiries and evaluations, where the simple management of an enormous flow of data presents problems, is clear.

Can records be trusted to be accurate?

The answer to that question is probably most of the time, yes, but sometimes, no. To trust records entirely is to be naive and to overlook the possibility of simple human error, forgetful clerks, or deliberate lying on the part of those who furnish information (i.e., misstatements concerning taxable income, the value of property, the number of dependents, and the like). There are at least six factors which bear upon the accuracy of records which one might want to use. They include:

1. errors introduced by persons to whom the records pertain, either inadvertently (not being quite sure, for instance of the value of the real estate one owns), or by intent (as in the examples above).

2. errors introduced by data collectors who devise the records (e.g., failure to count all the legitimate residents in a city block, misinterpretation of information received, transposition of numbers onto permanent records, etc.)
3. errors introduced by recording or filing mistakes. Clerical mistakes and filing errors make some records either incorrect or totally inaccessible.
4. changes in record-keeping systems which make some records non-comparable to others. If a local police department changes the way it defines "breaking and entering," for example, the statistics on the rate of that crime may change even though the true rate remains the same. In the same way, changes in the frequency or thoroughness with which some events are recorded may alter "true" statistics. One contemporary example would be the reporting of rape. It is not clear whether the incidence of rape across the U.S. is on the uprise, or whether the new feminist consciousness, coupled with more sensitive police handling of such crimes and their victims, has tended to make the reporting of them more common.
5. errors due to historicity or temporal changes. Information which has been recorded at some point in time may have become obsolete if it has not been undated periodically. Changes in the number of children encompassed by a family provide a good example. The birth of another child, if not recorded in the file, could alter tax records and the like.

6. factors which enter into the development of "official statistics." The reader is referred to the excellent dissertation by Johnson (1973) on the "The Social Construction of Official Information." Johnson spent a year as a participant observor in a social welfare agency, and documents in detail how "records" are generated in such agencies, in particular the required statistical reports which become the "official information" for the agency. To quote Johnson (p. x):

> "To successfully complete such statistical reportings, in every instance the social workers were asked to 'reduce' their knowledgeable understandings of their activities in the linguistic terms provided by a given report. As the members were held rationally accountable to so many different administrative structures and in so many different terms, it was only by making use of one's understanding of the situated official reporting context which allowed for the possibility of 'making sense' of a given report, and to further impute the intentions of the reporting format. This means that the situational reporting context is not only partially independent of the organized features of the other official work contexts, but furthermore, this was commonly known by the social workers as one of their organizational facts-of-life. By making use of such an understanding, the social workers and/or administrative personnel in these welfare agencies used official documents and statistical reports in a continually ongoing and self-organizing attempt to change or stabilize the nature of their everyday practices in accord with their individual motives, intentions, plans, dreams, fears, hopes and so on."

To translate, Johnson is saying that even official reports are responded to in terms of who gets the report, what its perceived purpose is, and how the respondent perceives it will have an impact on him as a person and worker. Official data are, in short, doctored by respondents from a variety of perspectives.

For those reasons, and no doubt many others, it would be unsophisticated in the extreme to accept documents and records at face value. The wary inquirer will attempt a variety of means to certify or

warrant that a record is accurate as represented, including checking other records which might triangulate the first and simply asking (at some point in the inquiry) the person about whom the document obtains.

Are there special ethical problems in the use of records?

The answer is of course, yes. This is especially true of records which may be personal, private, prohibited, or simply not well covered in terms of access principles. State law (which varies from state to state) and the Federal Freedom of Information Act make clear which documents will be available to private citizens and which will not. Among those prohibited records from the latter regulations would be such records as pertain to classified defense or foreign policy information, personnel rules and practices of federal agencies, anything specifically exempt by Federal statute, things which are privileged in civil litigation, bank records, oil well data, and a variety of other types of official records.

Investigative reporters give a number of reasons why they continue to seek (and occasionally obtain illegally) certain kinds of private records. They cite the public's right to know, the redress of criminal or civil wrongs, or civil disobedience. While these reasons for the acquisition of records which are prohibited by law from being public are questionable even for journalists (i.e., they fall into a morally "grey" area which cannot be dismissed by refuge in a solid social conscience), they are most surely unethical for the evaluator. Nevertheless, there will be times when the acquisition of a document or record appears desirable, and it seems to be impossible to acquire it. The evaluator

needs to balance carefully his sense of the public's right to know, the possible value of a record, and his willingness to engage in behavior which may be less than professional (e.g., asking an "insider" to obtain the record from the files for him). The leak of the Pentagon Papers--with the resultant break-in at the office of Daniel Ellsberg's psychiatrist--are good examples of how records may be obtained, either from an inside source (sometimes called by journalists a "kamikaze"), or from clearly illegal means. The naturalistic evaluator needs to ask whether he wants to be involved in either of those forms of record acquisition (even--and especially--if the records do not contribute to the public's right to know as did the Pentagon Papers; the evaluator is simply not involved in those kinds of decisions on a day-to-day basis). The journalists' stance is that there are no documents and records which are inaccessible. Some just take more time or more devious means to procure than others. We would take the posture that that stance is simply not a tolerable one for the kind of inquiry which attends most evaluative efforts. To the extent that it is clearly illegal, it is off limits to the naturalistic inquirer. Situations which are borderline must be dealt with on an individual basis, but the acquisition of records to which one has no legal access ought first to be cleared with someone higher in authority before it is undertaken. In most instances, serious professional or legal breaches in an effort to collect records is neither necessary nor desirable.

Epilog

We have reviewed here some excellent techniques for making use of a variety of inexpensive and rich resources--documents and records.

Both documentary analysis and record utilization are useful either on their own, that is, as a primary technique, or as supplementary techniques, using the concept of "multiple operation" research. With new fiscal constraints on the amounts which may be spent for research, both techniques need to be explored as weapons in the methodological arsenal of naturalistic evaluators. The strengths of the two techniques far outweight the costs (which tend to be solely in the collection of such written material and the attendant analysis), and they can and do produce data which may be collected otherwise only by more costly means.

The strengths of documentary analysis are manyfold. It is entirely unobtrusive and non-reactive. It results in data as well-grounded as any method, and documents themselves are unchanging, may be analyzed at any time, and reanalyzed as often as needed, e.g., for reliability or auditor checks. Documents (as opposed to records) express the writer's perspectives in his or her own terms--a factor which may be significant when personal or "natural" language is important. On the other hand, there are some weaknesses to the technique (which is why it is often used in conjunction with other methods). Documents are often the result of some self-serving motive. They tend to be uni-perspectival, to be spatially and temporally specific, and often represent unique and non-recurring events. Occasionally, documents fail to be representative, either because only a certain sub-set is available, or because it is difficult to specify the population which can then be subjected to the usual sampling rules. Documents are often difficult to subject to outside tests of confirmability. And authors of documents may be biased or untruthful (although that is the case even

with paper-and-pencil tests, with interviews, or with other forms of responses).

There are problems also of source authenticity--whether the document is the actual one written by the author must be determined by a variety of credibility checks; problems of document credibility--questions of whether the information contained therein is based on primary or secondary experience, whether it is based on stenographic record, or taped, or simply a recollection, whether the author was competent at the time he constructed the document, and whether it was intended in its present form for public consumption or thought to be private; and problems in the adequacy of the unitizing and categorizing process--are the rules spelled out clearly enough so that subsequent researchers can come to the same conclusions using those rules and the same set of documents? Thus, careful attention must be given in specific cases to capitalizing on strengths while taking possible weaknesses into account.

The strengths of records occasionally overlap with those of documents, in that they are unobtrusive and non-reactive. In addition, they are a rich and readily accessible resource (at least in most instances), and they are a low-cost resource. The represent a natural or "in context" source of information and a legally unassailable base from which to defend onself against allegations of misinterpretation and libel. The primary problem with records utilization is simply finding out what records exist and where they may be had. This takes practice, but freedom of information and sunshine laws make records more available than ever before, and they can and ought to be a useful primary or secondary tool for the naturalistic evaluator or inquirer.

We have, in additon, discussed some of the more common techniques employed in documentary and records analysis, namely content analysis and case survey aggregation analysis (for documents) and cross-indexing and the creation of chronologies of events and relationships (for records). The analysis of documents and records, while contributing to multiple operations research, however, also fosters the raising of ethical questions, particularly with respect to their actual acquisition and individual rights to privacy. The inquirer must consider whether the acquisition of any given record will result in a public good so great that the record (or document) must be obtained at any cost. Our posture on that issue has basically been conservative, erring on the side of avoiding that which is compromising or illegal in any way. The rule of thumb might best be: "If in doubt (about how you may acquire this document without illegal means), don't." Most of the situations and events with which educational evaluators must deal in everyday life simply are so public that the tactics of investigative reporters in searching out crimes and violations of the public weal are not appropriate.

Finally, we urge the naturalistic inquirer who has not had experience using these forms of information to practice using them; to search for ways to incorporate analysis of records and documents into his own repertoire of methods; and use the methods to embed his own hypothesis-testing and theory generation with grounded data.

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